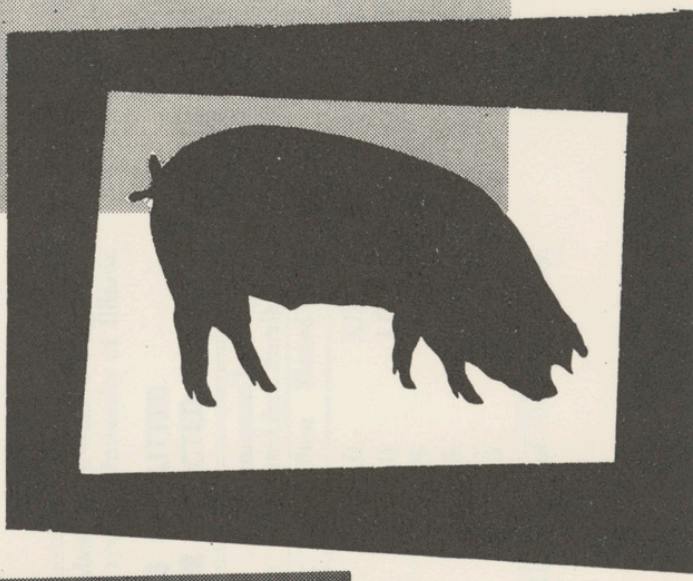
1967

Swine Producer's Guide

Cooperative Extension South Dakota State University

FS 278

Swine Producer's Guide



COOPERATIVE EXTENSION SERVICE
UNITED STATES DEPARTMENT OF AGRICULTURE
SOUTH DAKOTA STATE UNIVERSITY

Swine Producer's Guide

The success of a profitable hog enterprise can, in a large part, be attributed to efficient management in use of buildings, farrowing and growing facilities, feeders, waterers, pasture, balanced rations, and breeding animals.

Tables and guides covering these areas are present-

SPACE NEEDS FOR ALL AGES OF SWINE

Period	Head unit	Shelter, sq. ft./ head*	Concrete outside lot, sq. ft./head	Water head/cup	Feeder Hand,† ft./head	Feeder Self-fed head/door, head/foot
Breeding and gestation	Sow	15	None	15	2	2
Farrowing						
Pens	Sow	56	30 (optional)	1	2	1
Stall	Sow	35	30	15	2	2
Starting						
Solid floor	Pig	5	—	50	—	1
All or partially slotted floor	Pig	3	—	50	—	1
Growing						
Solid floor						
Weaning—75 pounds	Pig	3	3	50	¾	5
75-125 pounds	Pig	4	4	40	1	4
125-220 pounds	Pig	5	7	30	1¼	4
All or partially slotted floor						
Weaning—75 pounds	Pig	4	—	50	¾	5
75-125 pounds	Pig	6	—	40	1	4
125-220 pounds	Pig	8	—	30	1¼	4

*Gate or movable fence can be used to limit sleeping space (to reduce cleaning) while pigs are small.
†Figure both sides of a feeder. For example, a 6-foot feeder open on both sides has 12 feet of feeding space.

GENERAL SWINE PRODUCTION REQUIREMENTS

	50 to 75 lbs.	75 to 125 lbs.	125 to 210 lbs.	Sow gestation	Sow plus litter	Herd boar
Approximate daily feed consumption						
Feed consumed, lbs.	3.0	5.5	6.8	4–5.5	9–12	5–7
Manure produced*						
Solids, lbs.	2.9	5.2	6.5	4.5	10	6.5
Total, gal., av.†	0.65	1.30	1.80	1.40	2.80	1.80
Drinking water requirements 25 pigs per cup gravity water; 30-50 pigs per cup, pressure (40 psi) water						
Water required per day, gal.	1.25	2.00	2.50	4.5	6	5–7
Self-feeder space for protein supplement						
On dry lot, pigs per foot or per hole	4	5	6	—	—	—
On legume pasture, pigs per foot or per hole	5	6	7	—	—	2
Pasture area needed for swine, head per acre	15–25	10–20	10–20	1–5	1–5	¼ to ½ acre/ boar

*Does not include wash or rain water.
†Assume 59 lbs. per cubic foot average density, liquids plus solids.

ed in this fact sheet to help the swine producer plan his program so he uses his resources most profitably.

Temperature

Provide a temperature of 75° to 80° F. for 1 and 2 week old pigs. Solid walls in pens will help prevent drafts.

Grouping of Pigs

Group pigs according to size and weight. Pen size in complete confinement should be litter size, 8-10 pigs, and in an open shed building, 20-30 pigs can be penned together.

SPRAY COOLING HOGS

1 nozzle per 25-30 hogs
Nozzles 4 ft. to 6 ft. from floor
Approximately 8 feet apart
1 gallon per hour at 10-30 psi
Thermostatic water shutoff at 78°

SUN SHADES
(Paint top side roof white, bottom side black)

Wt. of pigs, lbs.	Sq. ft. per head
40 to 75	4
75 to 125	6
125 to 220	8
Sows	15 to 18

These data from economic research provide rough guides to the labor and capital required for producing hogs. More specific plans for individual farms will require adjustment of these figures to local conditions and prices.

COST OF PRODUCING 100 POUNDS OF HOGS*

Item	Amount	Value	Percent
Feed	413 lb.	$10.46	70.1
Labor, direct and indirect	1.37 hours	1.37	9.2
Other capital			
Power, machinery, and equipment	——	1.01	6.8
Buildings	——	.40	2.7
Bedding	——	.18	1.1
Cash expense	——	.55	3.7
Interest on beginning inventory	——	.26	1.7
General farm expense	——	.70	4.7
Total costs	——	$14.93	100.0

*Data from 1955-1960 detailed cost studies of 50-litter average size produced mainly on a two-litter pasture system. University of Illinois.

LABOR REQUIREMENTS PER LITTER FOR HOG PRODUCTION UNDER SELECTED SYSTEMS

Segment of enterprise	All portable housing	All permanent housing and automated feed distribution: Solid floor	Slotted floor
Breeding herd maintenance	3.0	3.0	3.0
Farrowing to 4 weeks	6.0	5.0	3.0
Nursing 4-8 weeks	3.0	2.5	2.0
Growing and finishing	8.0	6.5	4.0
Total	20.0	17.0	12.0

Department of Agricultural Economics, University of Illinois, January, 1964.

An animal unit is a common denominator based on feed consumption. For example, it is generally estimated that the feed allowance of one mature cow will feed five hogs raised to 200 pounds. For this reason, the "animal unit per head" on this class and age of animals is 0.2. The table below gives the approximate animal units for different classes and ages of livestock.

ANIMAL UNITS

Type of livestock	Animal units per head
Horses	1
Cows	1
Bulls	1
Young cattle over 1 year	0.5
Calves	0.25
Brood sows or boars	0.4
Hogs raised to 200 pounds	0.2
Ewes or rams	0.14
Lambs	0.07
Poultry (per 100)	1

FEED SUPPLY NEEDED ACCORDING TO SEX AND/OR AGE

Breeding gilt from weaning (35 pounds) to breeding age (8 months):

Corn or equivalent	14 bushels
Protein supplement	120 pounds
Legume pasture	.1 acre

Sow (gilt) breeding to farrowing (winter gestation):

	Hand feeding	Self-feeding
Corn or equivalent	10 bushels	16 bushels
Protein supplement	115 pounds	115 pounds

Sow (gilt) litter, breeding to farrowing, farrowing to weaning, plus creep feed for pigs (25 pounds per pig):

¾ to 1 ton complete mixed balanced ration (amount needed will be approximately ¾ ton if hand fed and 1 ton if sow is self fed)

Sow and litter, farrowing to weaning (8 weeks):

Corn or equivalent	9.5 bushels
Protein supplement	130 pounds
Creep ration	200 pounds

Spring pig on pasture, weaning to market (35 to 225 pounds):

Corn or equivalent	10.5 bushels
Protein supplement	80 pounds
Legume pasture	.05 acre

Fall pigs in dry lot, weaning to market (35 to 225 pounds):

Corn or equivalent	11.5 bushels
Protein supplement	100 pounds

Boar for 1 year:

Corn or equivalent	20 bushels
Protein supplement	120 pounds
Pasture	¼ acre

NUTRIENT REQUIREMENTS FOR SWINE PER POUND OF TOTAL RATION

	Market stock						Breeding stock			
							Pregnant females and breeding boars		Lactating females	
	Liveweight of stock, lbs.						Young stock	Adults	Gilts	Adults
	25	50	100	150	200	250	(300 lbs.)	(500 lbs.)	(350 lbs.)	(450 lbs.)
Expected daily gain, lb.	0.8	1.2	1.6	1.8	1.9	1.8	1.00	0.7	---	---
Total feed (air dry), lb.	2.0	3.2	5.3	6.8	7.5	8.3	6.0	7.5	11.0	12.5
Total digestible nutrients, %	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Crude protein, %	18.0	16.0	14.0	13.0	12.0	12.0	15.0	14.0	15.0	14.0
Inorganic nutrients:										
Calcium, %	0.65	0.65	0.50	0.50	0.50	0.50	0.6	0.6	0.6	0.6
Phosphorus, %	0.50	0.50	0.40	0.40	0.40	0.40	0.4	0.4	0.4	0.4
Salt (NaCl), %	0.50	0.5	0.50	0.50	0.50	0.50	0.5	0.5	0.5	0.5
Vitamins:										
Vitamin A, I.U.*	600	400	400	400	400	400	1333	1333	1333	1333
Vitamin D, I.U.	90.0	90.0	90.0	90.0	90.0	90.0	60.0	60.0	60.0	60.0
Thiamine, mg.	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Riboflavin, mg.	1.2	1.0	1.0	1.0	1.0	1.0	1.5	1.5	1.5	1.5
Niacin, mg.	8.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Pantothenic acid, mg.	5.0	5.0	4.5	4.5	4.5	4.5	6.0	6.0	6.0	6.0
Pyridoxine, mg.	0.6	0.6	---	---	---	---	---	---	---	---
Choline, mg.	400.0	---	---	---	---	---	---	---	---	---
Vitamin B_{12} mcg.	7.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0

*Carotene and vitamin A values based on 1 mg. carotene equals 533 I.U. vitamin A for pigs. Vitamin A requirement can be met by either carotene or vitamin A; both are not needed.

SOURCE: National Research Council, publication 648.

By **LaVerne J. Kortan,**
Extension livestock specialist, swine and sheep, and
Louis Lubinus, Extension agricultural engineer

Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the United States Department of Agriculture, John T. Stone, Dean of Extension, South Dakota State University, Brookings.

10M—1-67—5402

EXTENSION SERVICE
U. S. DEPARTMENT OF AGRICULTURE
SOUTH DAKOTA STATE UNIVERSITY
BROOKINGS, SOUTH DAKOTA

OFFICIAL BUSINESS
5M—6-65—2770

PENALTY FOR PRIVATE USE TO AVOID
PAYMENT OF POSTAGE, $300